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- (72) Inventors: SINGH, Sharat; 3420 Royal Meadow Lane, San Jose, CA 95135 (US). ULLMAN, Edwin, F.; 135 Selby Lane, Atherton, CA 94025 (US). For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



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(54) Title: METHODS FOR SINGLE NUCLEOTIDE POLYMORPHISM DETECTION

(57) Abstract: Methods and compositions are provided for determining large numbers of single nucleotide polymorphisms in target DNA employing particles having (1) primers complementary to sequences in the target DNA where the next succeeding 3'-nucleotide is a potential single nucleotide polymorphism and coding composition members, where the members are unique for each primer, and (2) differentially labeled terminating nucleotides, where the label permits separation of the terminating nucleotides. Desirably the particles are separated into groups having a common prevalent next succeeding nucleotide. The particles and target DNA are combined under nucleotide extending conditions, the particles separated into groups in accordance with the terminating nucleotide and the coding members identified, so that one knows the sequence and the single nucleotide polymorphism. Various protocols are provided for the determination.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/06135

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 710 028 A (NAVOT NIR ET AL) 20 January 1998 (1998-01-20) the whole document	1-27
A	WO 98 59066 A (MOLECULAR TOOL INC) 30 December 1998 (1998-12-30) page 3-4; examples page 10 page 21-26; claims	1-27

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PASTINEN T ET AL: "MINISEQUENCING: A SPECIFIC TOOL FOR DNA ANALYSIS AND DIAGNOSTICS ON OLIGONUCLEOTIDE ARRAYS" GENOME RESEARCH, COLD SPRING HARBOR LABORATORY PRESS, US, vol. 7, no. 6, 1 June 1997 (1997-06-01), pages 606-614, XP000699761 ISSN: 1088-9051 the whole document	1-27
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P,X	WO 99 22030 A (WHITE P SCOTT ;CAI HONG (US); NOLAN JOHN P (US); UNIV CALIFORNIA) 6 May 1999 (1999-05-06) the whole document	1-3,5, 18,24
E	WO 00 39335 A (ACLARA BIOSCIENCES INC) 6 July 2000 (2000-07-06) the whole document	1-3, 24-26

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internal Application No

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